

Determining Factors of Inward Foreign Direct Investment (FDI) in Selected Muslim Countries

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ABSTRACT

This study analyzed the impact of country risk, regulatory quality, and selected macroeconomic factors on the inflows of Foreign Direct Investment (FDI) into selected Muslim countries. A quantitative study was applied using the panel regression method on data of 13 Organization of Islamic Cooperation (OIC) countries from 2002 to 2019. The developed panel regression models evaluated the country risk, institutional quality, and selected macroeconomic factors which included the country's inflation level, exchange rate, economic output, and political system. These factors are deemed important in many Muslim countries which are known to be associated with poor institutional quality and high exposure to risks due to a multitude of factors such as political instability, wars, and poor management of natural resources. The composite score of the International Country Risk Guide was applied to analyze the impact of country risk on the inflows of FDI and to provide managerial relevancies for different stakeholders. The results showed that in general, Muslim countries tend to have a moderate level of country risk exposure and a low level of institutional quality. As investors prefer to invest in countries with low exposure to risks, the

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institutional quality must be enhanced to play a vital role in enhancing the flow of foreign investments. Countries with higher economic output have more opportunities to receive higher investment flows.

ملخص

تدرس هذه الورقة البحثية بالتحليل كل من تأثير المخاطر القُطرية والجودة التنظيمية وعوامل مختارة من عوامل الاقتصاد الكلي على تدفقات الاستثمار الأجنبي المباشر إلى بلدان إسلامية مختارة. وتم تطبيق دراسة كمية باستخدام طريقة انحدار بيانات اللوحة على بيانات 13 دولة عضو في منظمة التعاون الإسلامي (OIC) من 2002 إلى 2019. وقيمت نماذج انحدار اللوحة المطورة للمخاطر القُطرية، والجودة المؤسسية وعوامل مختارة من عوامل الاقتصاد الكلي التي تضمنت مستوى التضخم في الدولة، وسعر الصرف، والناتج الاقتصادي، والنظام السياسي. وتعتبر هذه العوامل مهمة في عدد من البلدان الإسلامية والتي من المعروف أنها مرتبطة بضعف جودة المؤسسات والتعرض الكبير للمخاطر بسبب العديد من العوامل مثل عدم الاستقرار السياسي والحروب وسوء إدارة الموارد الطبيعية. وتم تطبيق النتيجة المركبة للدليل الدولي للمخاطر القُطرية لتحليل تأثير مخاطر البلد على تدفقات الاستثمار الأجنبي المباشر وتوفير الصلات الإدارية لمختلف أصحاب المصلحة. وأظهرت النتائج أنه بشكل عام، تميل البلدان الإسلامية إلى أن يكون لديها مستوى معتدل من التعرض للمخاطر القُطرية ومستوى منخفض من الجودة المؤسسية. ولأن المستثمرين يفضلون الاستثمار في البلدان ذات التعرض المنخفض للمخاطر، يجب تحسين الجودة المؤسسية للعب دور حيوي في تعزيز تدفق الاستثمارات الأجنبية. كما أن البلدان ذات الإنتاج الاقتصادي الأعلى تتمتع بفرص أكبر لتلقي تدفقات استثمار أعلى.

ABSTRAITE

Cette étude a analysé l'impact du risque pays, de la qualité de la réglementation et de certains facteurs macroéconomiques sur les flux d'investissements directs étrangers (IDE) dans certains pays musulmans. Une étude quantitative a été appliquée en utilisant la méthode de régression par panel sur les données de 13 pays de l'Organisation de la coopération islamique (OCI) de 2002 à 2019. Les modèles développés de régression en panel ont évalué le risque pays, la qualité institutionnelle et certains facteurs macroéconomiques, notamment le niveau d'inflation, le taux de change, la production économique et le système politique du pays. Ces facteurs sont jugés importants dans de nombreux pays musulmans, dont on sait qu'ils sont associés à une mauvaise qualité institutionnelle et à une forte exposition aux risques dus à une multitude de facteurs tels que l'instabilité politique, les guerres et la mauvaise gestion des ressources naturelles. Le score composite de l'International Country Risk Guide a été appliqué pour analyser l'impact du risque pays sur les flux d'IDE et pour fournir des éléments de gestion pertinents aux différentes parties prenantes. Les résultats ont montré qu'en général, les pays musulmans ont tendance à avoir un niveau modéré d'exposition au risque pays et un faible niveau de qualité institutionnelle.

Comme les investisseurs préfèrent investir dans des pays peu exposés aux risques, la qualité des institutions doit être améliorée pour jouer un rôle essentiel dans l'accroissement des flux d'investissements étrangers. Les pays dont la production économique est plus élevée ont plus de chances de recevoir des flux d'investissement plus importants.

Keywords: Country Governance, Country Risk, Foreign Direct Investment, Institutional Quality

JEL Classification: F21, F36

1. Introduction

In many developing economies, the internal state-generated revenues alone are not adequate to finance the intended government development projects, leading to the need for other sources of financing. There are two common sources of funding for countries, which are by creating more investment inflows or by using public debt. Depending on public debt burdens the state's economy, as the debt needs to be repaid through scheduled installments on the principal and its interest. In contrast, Foreign Direct Investment (FDI) encourages economic growth by promoting new economic activities, creating job opportunities, reducing unemployment, and improving people's welfare. In addition, the inflows of foreign capitals provide opportunities for local companies to invest in expanding the scope of their businesses as well as to improve the quality and quantity of production. Foreign investment helps the transfer of technology and increases the level of market competitiveness for local businesses ([Alfaro et al., 2004](#); [Alguacil et al., 2011](#); [Madura, 2010](#); [Nor et al., 2015](#); [Pegkas, 2015](#); [Widiastuti et al., 2020](#)).

Most Organization of Islamic Cooperation (OIC) members are developing countries that require massive sources of funding to finance numerous national development projects. These Muslim countries have great potentials to grow into developed countries and are blessed with abundant natural sources and a large population. At present, Muslim countries contribute to approximately 23% of the world's total population. The global Muslim population enjoys a growth, whereby a projection from the United Nations Population Fund (UNFPA), as shown in Table 1, shows that the Muslim population will reach 2,588 million out of the world's total population of 9,322 million in 2050.

Table 1: Muslim and World Populations

Population (In million)	1950	2000	2015	2025	2050
World Population	2.520	6.057	7.270	7.937	9.322
Muslim Population	361	1.209	1.625	1.921	2.588

Source: United Nation Population Fund (UNFPA, 2012)

In addition to promising human capital, Muslim countries are blessed with abundant natural resources. In the global oil production industry, Muslim countries currently hold between 66.2 to 75.9% of world oil reserves through Saudi Arabia, Iraq, Iran, Kuwait, United Arab Emirates, Qatar, Yemen, Libya, Nigeria, Algeria, Kazakhstan, Azerbaijan, Malaysia, Indonesia, and Brunei. In the global trading market, Muslim countries have control over many of the world's important economic trade routes. Another industry that has enormous potential to be developed in Muslim countries is the agricultural industry. These countries have an area of 2,935 million hectares, which is about 22 percent of the world's land area of 13,392 million hectares. Utilizing this vast land area for agricultural use will secure the food needs of Muslim countries and reduce their over-reliance on other countries ([Majoka et al., 2012](#)). The increasing population, abundant natural resources, controls over many crucial economic trade routes, and agricultural privileges provide Muslim countries with huge opportunities for economic growths. These growths require enormous capital which would be best met through inflows of FDI.

Prior studies that focused on the relationship between country-specific macroeconomic variables and FDI found that inflation ([Asamoah et al., 2016](#); [Bengoa and Sanchez-Robles, 2003](#); [Boateng et al., 2015](#)), the exchange rate ([Asamoah et al., 2016](#); [Bénassy-Quéré et al., 2001](#); [Kosteletou and Liargovas, 2000](#)), and economic output ([Boateng et al., 2015](#); [Kayalvizhi and Thenmozhi, 2018](#); [Muslim, 2016](#)) affect the inflow of FDI. Other studies found that investors prefer to invest in countries with low exposure to risks and stable macroeconomic conditions ([Asamoah et al., 2016](#); [Aziz, 2018](#); [Busse and Hefeker, 2007](#); [Grosse and Trevino, 2005](#); [Madura, 2010](#)). In addition, the quality of the country's governance, or the institutional quality, also plays an important role in the inflow of foreign investments ([Asamoah et al., 2016](#); [Aziz, 2018](#); [Busse](#)

[and Hefeker, 2007](#); [Herrera-Echeverri, Haar, and Estévez-Bretón, 2013](#); [Mina, 2007](#); [Quazi, 2007a](#)).

This study aims to investigate the impact of country risk, institutional quality, and macroeconomic factors which include the inflation level, exchange rate, economic output, and political system on the inflow of FDI. The work extends the studies by [Muslim \(2016\)](#) and [Sarwedi \(2002\)](#), who studied macroeconomic impacts on Indonesia's FDI, with the additional factors of country risk and institutional quality included. The results are anticipated to highlight the significant roles of country risk and institutional quality in determining FDI inflows and could serve as guidance for the governments in Muslim countries when establishing policies concerning FDI.

2. Literature Review

2.1. Macroeconomic Impacts on FDI

The inflation level in a country provides a sign of internal economic stability, as it indicates price stability. High inflation level causes the price of goods and services to increase, raising the cost of wages and raw materials for their production. In a high inflationary environment, the value of real money falls, which leads to a continuing decline in the production of goods and services at the aggregate level. High inflation indicates the failure of the government to balance the budget using effective monetary and fiscal policies. In severe cases, continuing inflation can lead to hyperinflation, where the money loses its value and ceases to be a useful medium of exchange. Such conditions lead to an economy that is unattractive for investors and thus hamper new investment. For example, [Boateng et al. \(2015\)](#) discovered that Norway's inflation produced significantly negative results in attracting foreign investment while [Asamoah et al. \(2016\)](#) found that inflation volatility adversely affects the FDI inflows in 40 countries. [Bengoa and Sanchez-Robles \(2003\)](#) analyzed the impact of macroeconomic conditions on FDI using the panel data for 18 Latin American countries between 1970 and 1996. The findings showed that inflation has a negative and significant effect on foreign investment. In contrast, [Sánchez-Martín et al. \(2014\)](#), [te Velde and Bezemer \(2006\)](#), and [Quazi \(2007b\)](#) found insignificant coefficients of inflation on inward FDI.

In the business environment, a stable exchange rate means simpler a business operation as the profits on investments can be estimated directly. The fluctuations and uncertainties in the exchange rate affect investment decisions. An appreciation in the local currency will increase the costs for the factors of production, as foreign firms and corporations will have to pay higher wages or salaries and acquire raw materials at higher prices ([Madura, 2010](#)). In addition, when the exchange rate is volatile, there is a potential reduction in the anticipated earnings on investments. The exchange rate distortions and volatility could lead to a fall in the value of assets invested by foreign multinational companies and is detrimental to the inflow of FDI ([Asamoah et al., 2016](#); [Madura, 2010](#)). In contrast, [Kosteletou and Liargovas \(2000\)](#) argued that there is no clear impact of the exchange rate volatility on FDI and that the two can be positively or negatively correlated. [Bénassy-Quéré et al. \(2001\)](#) claimed that entrepreneurs prefer to invest in countries with a low level of exchange rates as the labor wages and transportation costs are cheaper.

The economic output reflects a country's economic development. One of the common measures for the economic output is by estimating the Gross Domestic Product (GDP), which is based on the value of goods and services produced by a country within a particular year. A high GDP illustrates a high income of the population, which influences the consumers' consumption pattern and companies' profits. Achieving a high GDP reflects the realization of the country's economic objective and shows that a decent economic environment is in place, which promotes investment. Economic growth is usually associated with a fertile business climate that is supported by a good investment. Increased FDI will positively affect the production process in the economy and promotes household consumption, therefore increasing the country's economic growth ([Akalpler & Adil, 2017](#); [Azam, 2016](#); [Özek, 2020](#)). [Boateng et al. \(2015\)](#) discovered that Norway's real and sectoral GDP has a positive and significant impact on FDI inflow. A similar positive impact is also found in studies by [Jaafar and Hossain \(2007\)](#), [Ang \(2008\)](#), [Frenkel et al. \(2004\)](#), [Kimino et al. \(2007\)](#), [Majeed and Ahmad \(2010\)](#), [Lean and Tan \(2011\)](#), [Kolstad and Wiig \(2012\)](#), [Al-jaiifi et al. \(2016\)](#) and [Kayalvizhi and Thenmozhi \(2018\)](#).

As shown in previous studies, inflation, exchange rate, and economic growth contribute to the inflow of FDI. Thus, it is important to determine

the impact of these variables on the inflow of FDI to the Muslim countries in this study. The following hypotheses are proposed:

Hypothesis 1: Higher inflation discourages the inflow of foreign investment.

Hypothesis 2: Appreciation in local currency reduces the inflow of foreign investments.

Hypothesis 3: Higher economic output encourages the higher inflow of FDI.

2.2. Institutional Quality Impact on FDI

Country governance, or institutional quality, is an essential factor that promotes the inflow of FDI and helps to ensure a stable rate of economic growth. A stable and structured government affects the motivation of investors to carry out investment activities. Foreign investors prefer to invest in countries that are considered to have a proper bureaucratic system, responsive public services, political stability, a healthy economic environment, and adequate security. The investment environment in a country requires an ethical governance framework in which companies could continue to strengthen their performance through better corporate governance. A good existing ethical corporate governance framework can encourage foreign investors, as it is an instrument for assessing organizational structures that are formally recognized in an economy. To overcome government inefficiencies, the governments in countries with developing economies can set the right corporate governance standards by enforcing specific rules and conditions for conducting any business activity. Rational investors believe that when companies trade internationally, there are significant impacts and needs on the structure of corporate governance. Effective corporate governance will protect the rights of minority investors, thereby encouraging FDI. Empirical analysis on 22 developing countries confirms that corporate governance standards influence investment decisions, although many of these standards are not implemented effectively and efficiently. The institutional environment in the economy affects investment decisions and a favorable investment environment reduces business risk ([Kayalvizhi and Thenmozhi, 2018](#)).

[Busse and Hefeker \(2007\)](#) found that the quality of bureaucracy and institutional frameworks encourage the flow of foreign investment. A decent structure of the government and corporate institutions influences the forming of an internationalization strategy and diversification of international companies. [Asamoah et al. \(2016\)](#) examined how

institutional quality influences the foreign investment inflows in 40 countries in Sub-Saharan Africa from 1996 to 2011. The study confirmed that the institutional quality in both the government and institutional circles at the company and industry levels increases the motivation of foreign investors to spread investment portfolios in certain countries. [Aziz \(2018\)](#) found that the performance of regulatory institutions and their quality lead to the ease of doing business and the increase in investment flows. These findings are in line with the results from [Asamoah et al. \(2016\)](#) and [Mina \(2007\)](#). [Herrera-Echeverri et al. \(2013\)](#) studied the foreign investment trends in 87 countries and found a strong positive correlation between state governance and FDI inflows. The study of [Quazi \(2007b\)](#) found that the inclusion of investment was heavily dependent on the policies taken by the government. Investment inflows are negatively correlated with changes in government policies that hinder international trade, more regressive taxation, tighter foreign investment regulations, more repressive financial systems, outrageous price and wage controls, and excessive bureaucracy. It can be concluded that many multinational companies, foreign investors, and governments consider institutional quality as a significant factor in promoting FDI. Thus, for this study, the following hypothesis is proposed:

***Hypothesis 4:** Better country governance encourages more inflows of foreign investment.*

2.3. Country Risk and FDI Inflow

[Madura \(2010:477\)](#) defined country risk as the potential adverse impact of a country's environment on companies' cash flows and divided it into political and financial risks, while [Hoti and McAleer \(2003\)](#) defined country risk as the capability of a country to pay off its international obligations. Country risk includes the credit obligations in a country and other risks from the economic, financial, and social conditions that are likely to affect the investments made in that specific country. The assessment of county risk is one of the crucial elements in the decision-making process for a company when initiating investment in foreign countries. Rationally, investors would avoid investing in a country with extreme risk, and those who already invested in a country would divest their businesses when there is an increasing risk. Most multinational companies will not be affected by every event that occurs but will pay attention to any incidents that may affect the industry.

[Madura \(2010:478-480\)](#) further discussed the forms of political risk. Firstly, the risk relates to the attitude of the consumers in a country, which is the tendency for the residents to buy and acquire specific products. Secondly, the risk can be due to the action of the government, law enforcement, and regulations, which may affect the company's cash flows. Next, security issues such as wars and terrorist attacks can make the business environment more volatile, threatening the safety of the employees and the asset of the corporations. In addition, inefficient government bureaucracy and corruption can complicate the process for business expansion and investment in new projects. For instance, unethical government employees expect gifts before approving applications submitted by companies, leading to unhealthy business competition through the awards of contracts or projects to companies that bribe government officials. The extreme form of political risk is in cases where the government could take over a business without any compensation.

Along with political risk, financial risk represents the current and potential state of the country's economy. The demands for products, services, and commodities strongly depend on the economy. Economic growth is one of the variables used for the assessment of the financial factor affecting the country's businesses. In some cases, forecasting future economic growth is necessary for the evaluation. [Madura \(2010\)](#) believed that three factors influence the growth of the economy: inflation, currency exchange rate, and interest rates. High inflation reduces the consumers' purchasing power and the consumption of goods and services. The currency exchange rate influences the demand for a product made in the country, whereby a strong currency reduces the market for the country's export, and vice versa. The interest rate affects economic growth; a higher rate tends to slow down the economic growth while a low rate stimulates faster growth.

Several studies analyzed the impact of country risk on FDI inflows. [Grosse and Trevino \(2005\)](#) argued that political risk and corruption play significant negative roles in the FDI inflows in Central and Eastern Europe. In contrast, institutional variables that reduce uncertainties and costs for MNEs encourage the flows of inward FDI. [Busse and Hefeker \(2007\)](#) conducted a study on 83 developing countries to find the linkage between the political risk, institutional variables, and the FDI inflow. The results show that government stability, internal and external conflicts,

corruption and ethnic tensions, law and order, democratic accountability of government, and quality of bureaucracy are highly significant determinants of FDI inflows.

In summary, the overall thrust of the institution-based view is that the institutional framework of the host country shapes a firm's internationalization strategy. [Asamoah et al. \(2016\)](#) examined how macroeconomic volatility affected the FDI in 40 countries in the Sub-Saharan African region over the period between 1996 and 2011. They concluded that while macroeconomic uncertainty adversely affects FDI, a good institutional quality increases the FDI inflow into the host country. [Hayakawa et al. \(2013\)](#) studied the impact of country risk in 89 countries and found the political risk to be the most dominant factor in attracting FDI, whereas financial risk does not play a significant role. The political risk is negatively correlated with the FDI inflow; the decrease in the political risk results in a higher inflow of FDI. The negative impact of political risk on FDI is also reported in the study by [Meon and Sekkat \(2012\)](#), [Al-jaiji et al. \(2016\)](#), and many recent studies. Thus, for this study, the following hypothesis is proposed:

***Hypothesis 5:** Greater exposure of country risk reduces the inflow of foreign investment.*

2.4. Political System on FDI Inflow

The existing studies on the effect of the political system on FDI inflow provide a mixed view. [Asiedu and Lien \(2011\)](#) believed that a democratic political system leads to a more volatile business environment, as such system requires frequent and more complex changes in establishing any economic and government policies. An autocratic system, on the other hand, provides stabilities of commercial regulations and a more conducive business environment. In contrast, [Holmes et al. \(2013\)](#) argued that a democratic political system offers opportunities for managers of MNEs to influence changes in the regulations, policies, and methods through lobbying, election, and interest groups. In the autocratic system, however, these managers would require strong power, political connection, and efforts to influence the government to change its policies and regulations in their favor. [Uddin et al. \(2019\)](#) found that the Pakistani military government system is more successful than a democratic government system in promoting the inflow of FDI. A democratic system

would lead to more uncertainties as many individuals and groups are fighting to reach the peak of the system. For this study, the following hypothesis is proposed:

***Hypothesis 6:** The political system affects the inflow of inward foreign investments*

3. Data and Methodology

This study examined the FDI trends in 13 Muslim countries with the highest population, including Indonesia, Pakistan, Nigeria, Bangladesh, Egypt, Iran, Turkey, Uganda, Algeria, Iraq, Morocco, Arab Saudi, dan Malaysia. Sudan, Afghanistan, and Uzbekistan were excluded from the list due to insufficient data. The Muslim population data was derived from the SESRIC. The panel regression method using the Fixed Effects (FE) approach was applied, whereby the effects of the omitted country-specific variables were treated as fixed constants over time. Although this approach provided consistent (but not necessarily efficient) parameter estimates, it removed any time-invariant information ([Egger & Winner, 2005](#)) and allowed the unobserved country effect (the heterogeneity effect) to be controlled ([Wooldridge, 2010](#)). The FE approach only considered short-term influences of the variables of interest ([Pirrotte, 1999](#)). Extended models were introduced with a lag parameter of 1 for robustness purposes. This study used secondary data in the form of annual frequency between 2002 and 2019. The details of each explanatory variable in this study are as follows.

The country risk was derived from the International Country Risk Guide (ICRG) Composite Country Risk indicator, which indicates the risk associated with a specific country. The country risk was assessed by three indicators of risk consisting of economic, financial, and political risks, where each indicator carried different weights and scores. The compilation of these indicators created a single composite country risk indicator (CR in equation (1)), which ranged from 0 to 100. A higher score of the composite country risk indicates that the specific country is exposed to a low level of risks derived from economic, financial, and political uncertainties, and vice versa ([ICRG, 2016](#)). The institutional quality was represented by the regulatory quality (RQ in equation (1)) indicator from the World Bank's World Governance Indicator (WGI). The indicator ranged from 0 to 100, where a higher score indicates better institutional quality.

For the macroeconomic factors, the GDP, currency exchange rate (ER in equation (1)), and the Consumer Price Index (CPI) values were obtained from the World Bank database. The CPI was used to represent the inflation level.

Based on the information above, the empirical model to examine the influence of the dependent variables on the FDI is as follows:

$$FDI_{it} = \alpha + \beta_1 ER_{it} + \beta_2 GDP_{it} + \beta_3 CPI_{it} + \beta_4 RQ_{it} + \beta_5 CR_{it} + \varepsilon_{it} \quad (1)$$

Where FDI, ER, GDP, CPI, RQ, and CR denote Foreign Direct Investment Inflow, Local Currency against USD, Gross Domestic Product, Consumer Price Index, Regulatory Quality, and Country Risk, respectively. Further, α , β , i , t , and ε denote constant or intercept, coefficient slope, i -unit, t period, and residual (*error term*), respectively.

To increase the robustness of the model, two exogenous variables were introduced into the regression model in equation (1): the type of government (GOV, as democratic or non-democratic political systems) and the labour force (LBF). The type of government ([Asiedu and Lien, 2011](#); [Holmes et al., 2013](#); [Uddin et al., 2019](#)) and labors ([Sarwedi, 2002](#); [Jaafar and Hossain, 2007](#); [Kimino, Saal and Driffield, 2007](#)) are important determinants of FDI inflow. The inclusion of the government type into the model aimed to evaluate the foreign investors' preferences towards a specific political system. The labour force indicates the employment level in a particular country, where a higher labour force provides a country with the ability to produce more outputs. The revised regression models are as follows:

$$FDI_{it} = \alpha + \beta_1 ER_{it} + \beta_2 GDP_{it} + \beta_3 CPI_{it} + \beta_4 RQ_{it} + \beta_5 CR_{it} + \beta_6 GOV_{it} + \varepsilon_{it} \quad (2)$$

$$FDI_{it} = \alpha + \beta_1 ER_{it} + \beta_2 GDP_{it} + \beta_3 CPI_{it} + \beta_4 RQ_{it} + \beta_5 CR_{it} + \beta_6 LBF_{it} + \varepsilon_{it} \quad (3)$$

GOV is a dummy variable representing a government system where 1 is a democratic political system, and 0 is a non-democratic political system. LBF stands for the labor force.

4. Results and Analysis

The descriptive statistics are presented in Table 2. As shown, the average regulatory quality score among the selected countries is 35.39%,

indicating a relatively low level of quality governance. The average ICRG Composite Country Risk score is 66.05%, which shows that the selected countries generally have a moderate level of country risk.

Table 2: Descriptive Statistics

	FDI	ER	GDP	CPI	RQ	CR
Mean	5.36E+09	2027.882	3.01E+11	13.093	35.38658	66.051
Median	2.75E+09	64.583	1.99E+11	7.3107	33.64929	65.271
Maximum	3.95E+10	29011.49	1.09E+12	81.863	75.96154	81.833
Minimum	-6.14E+08	1.301522	1.13E+10	-2.194	1.020408	36.396
Standard Deviation	6.82E+09	4456.006	2.46E+11	18.307	20.10899	8.057
Observations	181	181	181	181	181	181

Source: Author's calculation derived from EViews

The correlation matrix of the variables is presented in Table 3, which shows the relationship between the FDI and the other variables in the model.

Table 3: Correlation Matrix

	FDI	ER	GDP	CPI	RQ	CR
FDI	1					
ER	-0.081	1				
GDP	0.280	0.048	1			
CPI	0.082	0.044	-0.006	1		
RQ	0.151	0.007	0.070	-0.018	1	
CR	0.175	-0.107	0.200	0.034	0.220	1

Source: Author's calculation derived from EViews

In general, we expect that all five factors that include exchange rate, GDP, inflation, regulatory quality, and country risk are positively related to FDI inflows except inflation. The matrix shows negative correlations of the exchange rate and country risk against FDI, while inflation positively correlates with FDI. The multivariate regression results are presented in Table 4 and Table 5.

Table 4: Regression Results

Variable	Model 1		Model 2		Model 3		Model 4	
	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics
ln ER	-0.733***	-3.301			0.013	0.503		
ln GDP	2.203***	8.423			0.837***	13.565		
CPI	0.000	0.021			-0.006	-1.556		
RQ	0.027***	3.075			0.016***	3.791		
CR					0.016*	1.766		
ln ER (-1)			-0.425**	-2.042			-0.001	-0.050
ln GDP (-1)			1.361***	5.581			0.795***	15.375
CPI (-1)			-0.003	-0.640			-0.005	-1.608
RQ (-1)			0.016*	1.949			0.0150***	4.155
CR (-1)							0.012	1.620
Constant	-33.410***	-5.381	-12.230**	-2.110	-1.669	-0.996	-0.058	-0.042
R2	0.687		0.698		0.616		0.675	
Adjusted R2	0.662		0.673		0.605		0.665	
F-statistics	27.550***		27.905***		54.045***		70.08***	
Durbin Watson	0.950		1.090		0.815		1.014	
Adjusted Observation	218		210		174		175	
Observation Period	2002-2019		2003-2019		2002-2015		2003-2016	

Source: Author's calculation derived from EViews Note: * Significant at the ten percent confidence level (less than $\alpha = 0.10$)

** Significant at five percent confidence level (less than $\alpha = 0.05$) *** Significant at one percent confidence level (less than $\alpha = 0.01$).

4.1 Hypothesis 1: Higher inflation discourages the inflow of foreign investment.

The results in Table 4 and Table 5 show that inflation is not a strong factor for investment decisions in the selected Muslim countries. The insignificant role of inflation agrees with the findings in [Sánchez-Martín et al. \(2014\)](#), [te Velde and Bezemer \(2006\)](#), and [Quazi \(2007b\)](#). The results, however, contradict the findings in [Asamoah et al. \(2016\)](#) and [Bengoa and Sanchez-Robles \(2003\)](#). Similarly, [Bénassy-Quéré et al. \(2001\)](#) claimed that entrepreneurs prefer to invest in countries with a low level of inflation.

Table 5: Robustness Test Results

Variable	Model 5		Model 6		Model 7		Model 8	
	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics	Coefficient	t-statistics
ln ER	-0.775***	-3.693	0.021	0.809	0.014	0.502	0.036	1.161
ln GDP	4.358***	8.846	0.886***	11.541	0.841***	11.345	0.94***	9.775
CPI	0.003	0.541	-0.006*	-1.744	-0.006	-1.374	-0.006	-1.495
RQ	0.023***	2.732	0.017***	5.039	0.016***	3.733	0.018***	4.031
CR					0.016*	1.678	0.012	1.274
LBF	-4.397***	-5.055			-0.008	-0.079		
GOV			-0.239	-1.345			-0.302	-1.388
Constant	-14.646	-2.111	-1.866	-0.911	-1.610	-0.879	-4.139*	-1.695
Adjusted Observation	218		218		174		174	
Observation Period	2002-2019		2002-2019		2002 - 2015		2002 - 2015	

Source: Author's calculation derived from EViews Note: * Significant at the ten percent confidence level (less than $\alpha = 0.10$)

** Significant at five percent confidence level (less than $\alpha = 0.05$)*** Significant at one percent confidence level (less than $\alpha = 0.01$)

4.2 Hypothesis 2: Appreciation in local currency reduces the inflow of foreign investments.

In terms of the exchange rate, only models 1 and 5 show significant negative correlations of the exchange rate with FDI. The results agree with the findings of [Kosteletou and Liargovas \(2000\)](#), who argued that there is no clear impact of the exchange rate volatility on FDI, as the impact can be positively correlated or otherwise depending on the benefits that are foreseen by potential investors. For example, [Sirin \(2017\)](#) studied the determinant factors of foreign direct investment in Turkey and found that the exchange rate was negatively and significantly correlated with the inflow of FDI. Similar evidence of negative relationships was found in studies of [Grosse and Trevino \(2005\)](#) in 13 European countries and [Ang \(2008\)](#) in Malaysia. In contrast, many previous studies such as those conducted by [Boateng et al. \(2015\)](#), [Asamoah et al. \(2016\)](#), [Frenkel et al. \(2004\)](#), and [Yol and Teng \(2009\)](#) found a positive and significant correlation of the exchange rate on FDI inflows. From the perspective of foreign investors, a higher exchange rate of the local currency (devaluation) against the USD makes a factor of production and raw materials cheaper, making it an attractive investment prospect. The reverse is true in cases where the currency appreciates against the USD, where the foreign investors must pay for factors and production materials at higher prices ([Madura, 2010](#)). The negative relationship between the local currency exchange rates and FDI found in this study indicates decent economic prospects for Muslim countries, especially in the field of exports.

4.3 Hypothesis 3: Higher economic output encourages the higher inflow of FDI.

The results show that the GDP appears to be the indicator with the strongest impact and that the trend is consistent in all models. The positive coefficient of the GDP and its strong significance shows that the economic output and its outlook play a significant role in determining the inflow of foreign investments. These results support the findings of [Boateng et al. \(2015\)](#), [Muslim \(2016\)](#), [Sarwedi \(2002\)](#), [Al-jaifi et al. \(2016\)](#), [Jaafar and Hossain \(2007\)](#), and [Kayalvizhi and Thenmozhi \(2018\)](#), which suggested that investors prefer to conduct business in countries with better economic outlooks. Economic evaluation gives an essential initial signal for the investment worthiness of a country. It would

be more attractive to invest in a country with robust economic growth and avoid investing in a country with an uncertain economic outlook and a looming economic crisis. The economic outlook of the selected Muslim countries is expected to remain strong despite the turmoil in certain countries such as Yemen and Syria.

4.4 Hypothesis 4: Better country governance encourages more inflows of foreign investment.

Table 4 and Table 5 show that institutional quality plays a significant role in determining the flow of foreign investment and is found to be consistent in all models. A better institutional quality implies better country governance, which increases the confidence and motivation of investors and encourages the inflow of FDI. The results agree with the findings of [Kayalvizhi and Thenmozhi \(2018\)](#), [Busse and Hefeker \(2007\)](#), [Asamoah et al. \(2016\)](#), [Aziz \(2018\)](#), [Mina \(2007\)](#), [Uddin et al. \(2019\)](#), and [Herrera-Echeverri et al. \(2013\)](#). The known governance-related problems in Muslim countries, such as corruption, wars, fraud, and a heavily bureaucratic system, make institutional quality an important factor for investors when deciding for FDI in these countries. Thus, preserving decent regulations and improving country governance is necessary.

4.5 Hypothesis 5: Greater exposure of country risk reduces the inflow of foreign investment.

The positive correlation of country risk on FDI inflow is found only in models 3 and 6 at a 10% significance level. The results imply that higher political, economic, and financial uncertainties will reduce the inflow of FDI, which is in agreement with the findings of [Hayakawa et al. \(2013\)](#), [Al-jaifi et al. \(2016\)](#), [Meon and Sekkat \(2012\)](#), [Asamoah et al. \(2016\)](#), [Busse and Hefeker \(2007\)](#) and [Grosse and Trevino \(2005\)](#). The results also agree with the findings in [Aziz \(2018\)](#), who studied the inflow of FDI in 16 Arab countries from 1984 to 2012 and found that foreign investors tend to invest in countries with low exposure to risks. Similar results were reported in [Moniruzzaman \(2010\)](#), who stated that unfavorable business environments and a high level of political instability are responsible for the low FDI performance in Muslim countries. In addition, [Abdel Latif \(2019\)](#) found strong evidence that the Arab Spring and other political turmoil have led to a plunge in FDI flows in the MENA region. To protect the value of assets or capitals that has been invested and to minimize their

potential losses, rational investors avoid countries with high risks and prefer to conduct investment in countries with a stable political, economic, and financial environment. This rationalism is in line with the Islamic teachings related to risk management, whereby Islam encourages taking the steps in dealing with potential risk through necessary preparations, as explained in the Quran, Surah al-Hashr verse 18.

5.6 Hypothesis 6: The political system affects the inflow of inward foreign investments.

The government system plays no essential role in deriving foreign investments, as shown by the results of models 6 and 8 in Table 5. Muslim countries are blessed with different types of political systems, which provide foreign investors with a variety of choices when planning for investments. The results imply that foreign investors do not consider the type of government system as a crucial factor when deciding on an investment. The finding contradicts the results of [Uddin et al. \(2019\)](#) and [Asiedu and Lien \(2011\)](#), which stated that a non-democratic political system is more successful than a democratic government system in promoting the inflow of FDI. Furthermore, the labor force appears to affect the inflow of FDI negatively as shown in model 5, which contradicts with the findings in [Sarwedi \(2002\)](#), [Jaafar and Hossain \(2007\)](#), and [Kimino et al. \(2007\)](#) who stated that a larger labor force is associated with higher demand of economic outputs and better opportunities for investments.

5. Managerial Relevance

The findings highlighted the important impact of country risk and the institutional quality of the selected Muslim countries on the FDI. Policies that encourage the entry of foreign investment need to be maintained and improved, such as by reducing investment tax in specific sectors. Similarly, policies to increase institutional quality must be created and enforced. Law enforcement needs to be upheld, especially in aspects that can hinder the establishment of sound quality governance such as corruption, complicated bureaucracy, fraud, bribery, and others. Further, the results suggest that managers of multinational companies formulate several hedging strategies by conducting careful risk evaluation and assessment before making investment decisions. It is essential to preserve

and protect a suitable investment environment from the exposure of macroeconomic uncertainties.

Muslim countries under the Organization of Islamic Cooperation (OIC) are expected to cooperate among themselves to enhance development in terms of economy, education, defense, and others. Functional interactions between the Muslim countries will benefit the world's Muslim community. Although the inclination of Muslim countries to conduct trade with non-Muslim countries is not discouraged, the natural resources and human capital potentials in Muslim countries should be managed through cooperation between fellow Muslim countries. The government bodies, especially the Central Banks, Ministry of Trade, and Ministry of Finance should establish smart policies to reduce economic uncertainties, including maintaining stable inflation and exchange rate and providing support for Small and Medium Enterprises.

6. Conclusion

Foreign Direct Investment (FDI) helps countries by providing funds and technology for economic development. This study examines the impact of selected macroeconomic variables, country risk, and institutional quality on the inflow of foreign investment in selected Muslim countries. The results show the GDP as the variable with the highest impact. Among the factors for the low foreign investment in the selected Muslim countries is the low institutional quality due to instabilities in the political environment, problematic bureaucracy, rampant corruption, collusion, and nepotism. The increase in country risk is found to contribute negatively to the inflow of foreign investment, while the type of the political system carries no significant impact. The findings indicate that to improve FDI inflow, the quality of the existing government must be improved through revision of the laws, reduction of bureaucracy, and enforcement of the law and regulations that can improve government governance. A periodic assessment of country risk is needed to evaluate the risks and predict which risk determinants have the most impact. This study can be extended to investigate other factors that affect the flow of foreign investment, including technology and innovation, the level of public debt, interest rate, and culture.

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